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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,347	06/27/2001	Donald Henry Willis	PU010055	3517

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EXAMINER
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ANYASO, UCHENDU O

ART UNIT	PAPER NUMBER
2675	

DATE MAILED: 06/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/892,347

Applicant(s)

WILLIS, DONALD HENRY

Examiner

Uchendu O Anyaso

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 15 is/are rejected.
- 7) ☒ Claim(s) 13 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. **Claims 1-15** are pending in this action.

***Claim Rejections - 35 USC ' 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-3, 5, 6 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Carlson* (U.S. 4,523,230) in view of *Jang* (U.S. 5,361,094), and further in view of Mihara (EP 0457497).

Regarding **independent claims 1 and 6**, Carlson teaches a method of reducing sparkle artifacts in an image processing system by teaching how an image processing system using narrow-band coring such that filtering after coring suppresses sparkle (column 13, lines 46-50) wherein low-pass filters are coupled in a cascade through a summer wherein the first of the filters is associated with a lower subspectra and the second filter is associated with a higher subspectra (column 18, lines 29-49, figure 2a; *see also* column 8, lines 24-62, figure 2a) such that sparkle is suppressed (column 13, lines 46-50).

However, Carlson does not teach the steps of gamma correcting a video signal. On the other hand, Jang teaches a video signal processing circuit of a CCD-type color video camera that includes a gamma correction circuit, delay circuit, a chrominance signal processor and luminance signal processor (see Abstract; column 3, lines 26-45, figure 3 at 20).

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Thus, it would have been obvious to a person of ordinary skill in the art to combine Carlson and Jang because while Carlson teaches a method of reducing sparkle artifacts in an image processing system, Jang teaches a video signal processing circuit of a CCD-type color video camera that includes a gamma correction circuit, delay circuit, a chrominance signal processor and luminance signal processor (see Abstract; column 3, lines 26-45, figure 3 at 20). The motivation for combining these inventions would have been to improve the picture quality of a video device (column 2, lines 28-32).

Furthermore, Carlson and Jang do not teach how to slew rate limit a signal. On the other hand, Mihara teaches how to slew rate limit signals in varying rates and then displaying the signals (*see* Abstract; *see also* column 4, lines 23-27).

Thus, it would have been obvious to a person of ordinary skill in the art to combine Carlson, Jang and Mihara because while the combination of Carlson and Jang teach a method of reducing sparkle artifacts in an image processing system and gamma correcting a video signal in such a system, Mihara teaches shows how to slew rate limit signals in varying rates and then displaying the signals (*see* Abstract; *see also* column 4, lines 23-27). The motivation for combining these inventions would have been to provide an excellent waveform display device capable of efficiently displaying large quantity of data (column 2, lines 20-25).

Regarding **claim 2**, in further discussion of claim 1, Jang teaches how the step of gamma correcting further comprises the step of producing an output containing RGB gamma corrected video drive signal components (figure 3 at 20, 42, column 3, lines 28-40).

Regarding **claims 3 and 5**, in further discussion of claim 2, while Carlson and Jang do not teach how to slew rate limit a signal, Mihara teaches how to slew rate limit signals in varying rates and then displaying the signals (*see* Abstract; *see also* column 4, lines 23-27).

Thus, it would have been obvious to a person of ordinary skill in the art to combine Carlson, Jang and Mihara because while the combination of Carlson and Jang teach a method of reducing sparkle artifacts in an image processing system and gamma correcting a video signal, Mihara teaches shows how to slew rate limit signals in varying rates and then displaying the signals (*see* Abstract; *see also* column 4, lines 23-27). The motivation for combining these inventions would have been to provide an excellent waveform display device capable of efficiently displaying large quantity of data (column 2, lines 20-25).

Regarding **claim 11**, in further discussion of claim 6, Mihara teaches shows how to slew rate limit signals in varying rates and then displaying the signals (*see* Abstract; *see also* column 4, lines 23-27).

**4. Claims 4 and 7-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Carlson* (U.S. 4,523,230) in view of *Jang* (U.S. 5,361,094), and further in view of Mihara (EP 0457497), as in claims 1 and 6, and further in view of *Medin et al* (U.S. 5,936,621).

Regarding **claims 4, 7 and 8**, in further discussion of claims 1 and 6, Carlson, Jang and Mihara do not teach how to deinterlace a video signal. On the other hand, Medin teaches flicker filter circuits which function to deinterlace the video signals in order to reduce the flicker by

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providing a summation of the input data in order to reduce the high frequency component of the video line being display (*see* column 3, lines 40-61).

Thus, it would have been obvious to a person of ordinary skill in the art to combine Carlson, Jang and Mihara's inventions because while the combination of Carlson, Jang and Mihara teach how to reduce sparkle artifacts in an image processing system, gamma correcting a video signal and slew rate limit a video signal in a display device, Medin teaches flicker filter circuits which function to deinterlace the video signals by reducing the flicker by providing a summation of the input data in order to reduce the high frequency component of the video line being display (*see* column 3, lines 40-61). The motivation for combining these inventions would have been to reduce flicker in the display system (*see* column 3, lines 40-61).

Furthermore, Medin discloses how flicker filters 50 process color portions of the video signal 30 (column 5, lines 6-15).

Furthermore, Medin teaches how the input operates in frames of input data wherein the flicker reduction circuit comprises a synchronization circuit 82 and an adder/subtractor 88 (column 5, lines 55-60, figure 7 at 82, 88) such that the synchronization function 82 accepts a linear progression of video lines 80 as input, and outputs a sequence of at least two synchronized video lines, shown as video lines  $n$  to  $n+m$ ; in a preferred embodiment, video lines  $n+1$  to  $n+m$  are progressively delayed so that their sequence of control variables are synchronized in time with the control variables in video line  $n$  (column 5, lines 61 through column 6, line 3, figure 7 at 80, 82).

Regarding **claim 9**, in further discussion of claims 8, Jang teaches how the step of gamma correcting further comprises the step of producing an output containing RGB gamma corrected video drive signal components (figure 3 at 20, 42, column 3, lines 28-40).

Regarding **claim 10**, in further discussion of claims 9, Carlson, Mihara teaches how to slew rate limit signals in varying rates and then displaying the signals (*see* Abstract; *see also* column 4, lines 23-27).

5. **Claims 12 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Carlson* (U.S. 4,523,230) in view of *Jang* (U.S. 5,361,094), and further in view of Mihara (EP 0457497), as in claim 11 above, and further in view of *Sani et al* (U.S. 6,219,101).

Regarding **claim 12**, in further discussion of claims 11, Mihara teaches an algebraic unit in the form of a subtractor 11, a latch 18, and a second algebraic unit in the form of a adder 15 (*see* figure 13 at 36-39, column 7, lines 21-29).

However, Carlson, Jang and Mihara do not teach a comparator that determines the outputs of the algebraic unit. On the other hand, Sani teaches an invention that relates to video signal processing and to converting video signals from a format such as RGB having sequential scanning to an interlaced scanning format as used in composite video wherein comparators (114, 116, 120) are used so as to provide 256 comparison levels (column 8, lines 23-39, figure 6 at 114, 116, 120; column 1, lines 10-13).

Thus, it would have been obvious to a person of ordinary skill in the art to combine Carlson, Jang, Mihara, and Sani's inventions because while the combination of Carlson, Jang

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and Mihara teaches how to reduce sparkle artifacts in an image processing system, gamma correcting a video signal, and slew rate limit a video signal, Sani teaches an invention that relates to video signal processing and to converting video signals from a format such as RGB having sequential scanning to an interlaced scanning format as used in composite video wherein comparators (114, 116, 120) are used so as to provide 256 comparison levels (column 8, lines 23-39, figure 6 at 114, 116, 120; column 1, lines 10-13). The motivation for combining these inventions would have been to provide an efficient method of preventing flickering in a display device (column 1, lines 50-58).

Regarding **claim 15**, Sani teaches a multiplexer in the form of a 256-to-8 bit converter 128 that is connected to the comparators (114, 116, 120) (figure 6 at 128).

#### ***Allowable Subject Matter***

6. **Claims 13 and 14** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.



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U.S. Patent 5,247,169 to *Okada et al* for a method and an apparatus for picking up an image of the surface of an object to be inspected.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uchendu O. Anyaso whose telephone number is (703) 306-5934. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras, can be reached at (703) 305-9720.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks


Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

  
Uchendu O. Anyaso

05/25/2004

  
CHAUH NGUYEN  
PRIMARY EXAMINER